UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,580	08/25/2003	Richard Harvey	063170.6292	4093

5073   7590   04/14/2010

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ART UNIT	PAPER NUMBER
2194	

NOTIFICATION DATE	DELIVERY MODE
04/14/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/648,580	HARVEY ET AL.
	Examiner	Art Unit	
	LI B. ZHEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2010*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *1/26/10;3/9/10*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1 – 12 are pending in the application.

Response to Arguments

2.   Applicant's arguments filed 1/4/2010 have been fully considered but they are not persuasive. In response to the previous office action, applicant argues:

(1) Applicant argues that providing the first and/or the second key, as recited in Claim 1, satisfies the requirements of the "transformation test" as interpreted by the Office Action at least because the provision of the key(s) "transform electronic data such that the data has a different function or is suitable for a different use."

(2) Claim 1 is allowable at least because the proposed Bau-Bergeson combination fails to teach, disclose, or suggest "storing at least one object based on at least one of a plurality of Universal Description, Discovery and Integration (UDDI) objects as an entry in a directory, the directory comprising a hierarchical organization of a plurality of entries, each of the plurality of entries having a plurality of attributes." Nowhere does Bergeson contemplate "the directory comprising a hierarchical organization of a plurality of entries." In contrast, Bergeson merely discloses a schema that provides a relatively simplistic mapping of UDDI objects in a registry to various directory objects.

(3) Bergeson fails to expressly disclose in the cited portions or elsewhere how the directory is itself is organized, much less that the directory comprises a hierarchical organization.

(4) Bergeson fails to inherently disclose that the directory comprises a

hierarchical organization. A directory does not necessarily have a hierarchical

organization.

As to argument (1), Examiner respectfully disagrees because the claim simply

recites providing the keys and does not transform the keys. In the claims, either the first

or second key of an object is provided as the naming attribute for an entry in a directory.

While the claims recite a use for the first or second key (i.e. using the first or second key

as a naming attribute), the keys are not processed, changed or transformed. When the

first or second key is provided as a naming attribute, the first or second is not changed

or transformed. Therefore, claims 1 – 5 and 11 do not satisfy the requirements for the

"transformation test".

As to argument (2), Examiner respectfully disagrees because Bergeson

discloses a schema for representing UDDI data types in an LDAP directory [Section 2.

Abstract, p. 1]. Similar to Bergeson, applicant's specification discloses mapping of

UDDI environment using X.500/LDAP Directory Technology and "the hierarchy structure

of the X.500 and LDAP Directory Technology has been found to be suitable to the UDDI

environment" (p. 8, lines 26 – 29). Therefore, it is noted that the LDAP directory

disclosed in Bergeson is a hierarchy structure.

As to argument (3), Bergeson teaches that the UDDI objects have parent/child relationships (p. 2, 2nd paragraph) where the businessEntity object is a top-level container that contains one or more unique businessService object. The individual businessService objects contain specific instances of bindingTemplate, which in turn contains information that includes pointers to specific instances of tModel objects. The businessService object is a logical child of a single businessEntity object (p. 2, Section 4.2). The parent/child relationship between the businessEntity object and the businessService object is represented in a hierarchical manner where the businessEntity is the top-level or parent and the businessService is the next level down or child.

As to argument (4), Bergeson discloses a schema for representing UDDI data types in an LDAP directory [Section 2. Abstract, p. 1]. Applicant's specification discloses the LDAP directory as having a hierarchical organization ("the hierarchy structure of the X.500 and LDAP Directory Technology," p. 8, lines 26 – 29). Therefore, the LDAP directory disclosed in Bergeson also has a hierarchical organization. Furthermore, Bergeson teaches that the UDDI objects have parent/child relationships (p. 2, 2nd paragraph) where the businessEntity object is a top-level container that contains one or more unique businessService object. The businessService object is a logical child of a single businessEntity object (p. 2, Section 4.2). The parent/child relationship between the businessEntity object and the businessService object is represented using the hierarchical organization of the LDAP directory where the

businessEntity is the top-level parent and the businessService is the next level down

child.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.   Claims 1 – 5 and 11 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claim 1 recites a method for generating keys for objects comprising the steps of

storing objects in a directory, providing a defined key if the object has a defined key and

providing a second key if the object does not have a defined key. The method defined

in claims 1 – 5 and 11 does not pass the machine-or-transformation test. Specifically,

the method is not tied to a particular machine or apparatus and it does not transform a

particular article to a different state or thing. Storing objects in a directory and providing

a defined first key or a second key does not meet the transformation test because the

steps do not transform electronic data such that the data has a different function or is

suitable for a different use. In addition, the process including storing object in a

directory and providing a defined first key or a second key does not specifically or

inherently tie the process to a particular machine or apparatus. Therefore, the method

defined in claims 1 – 5 and 11 are non-statutory under 35 USC 101.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   **Claims 1 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over U.S. Patent Application Publication No. 2003/0023957 to Bau, III et al.

[hereinafter Bau] in view of "LDAP Schema for UDDI" [hereinafter Bergeson],

both references previously cited.

7.   As to claim 1, Bau teaches the invention substantially as claimed including a

method of generating keys for object(s) in a Web Services [p. 2, paragraph 0024]

arrangement, comprising:

        determining if the at least one object [conversational instance; p. 4, paragraph

0037 and pp. 7 – 8, paragraph 0074] has a defined first key [client embeds its own

instance identifier as part of the conversation ID; p. 6, paragraph 0063];

        if the at least one object has a defined first key, providing that defined first key for

the at least one object [other unique objects can be used to generate a unique identifier

in lieu of the GUID; p. 6, paragraph 0063]; and

        if the at least one object does not have a defined first key, providing a second

key for the at least one object [client generates a globally unique identifier (GUID); p. 6,

paragraph 0063]. Bau does not specifically teach storing at least one object based on

at least one of a plurality of Universal Description, Discovery and Integration (UDDI)

objects as an entry in a directory, the directory comprising a hierarchical organization of

a plurality of entries, each of the plurality of entries having a plurality of attributes and

providing a key for the at least one object as a naming attribute for the entry

corresponding to the at least one object in the directory, the defined first key uniquely

identifying the entry in the directory.

However, Bergeson teaches storing at least one object based on at least one of

a plurality of Universal Description, Discovery and Integration (UDDI) objects [p. 16] as

an entry in a directory [schema for representing Universal

Description Discovery & Integration (referred to here as UDDI) data types in an LDAP

directory; p. 1, Abstract; p. 4, Section 4.4.1], the directory comprising a hierarchical

organization of a plurality of entries [businessEntity is represented in the directory by

attributes, p. 2, Section 4.1.1; businessService is represented in the directory by

attributes, p. 3, Section 4.2.1; bindingTemplate is represented in the directory by

attributes, p. 3, Section 4.3.1; publisherAssertion is represented in the directory, p. 4,

Section 4.5.1; tModel is represented in the directory by attributes, p. 4, Section 4.4.1],

each of the plurality of entries having a plurality of attributes [attributes

uddiBusinessKey, uddiAuthorizedName, uddiOperator, uddiDiscoverURLs, uddiName,

uddiDescription, uddiIdentifierBag, uddiCategoryBag; p. 2, Section 4.1.1; p. 3, Section

4.2.1; p. 3, Section 4.3.1; p. 4, Section 4.5.1; p. 4, Section 4.4.1] and providing a key for

the at least one object as a naming attribute for the entry corresponding to the at least

one object in the directory [uddiBusinessKey; p. 5, Section 5.1], the defined first key

uniquely identifying the entry in the directory [uddiBusinessKey is the unique identifier

for a given instance of an uddiBusinessEntity; p. 5, Section 5.1], and if the at least one

object does not have a defined first key, providing a second key for the at least one

object as the naming attribute for the entry corresponding to the at least one object in

the directory, the second key uniquely identifying the entry in the directory

[uddiServiceKey, p. 11, Section 5.17; uddiBindingKey, p. 12, Section 5.18].

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify the invention of Bau to incorporate the features of

Bergeson. One of ordinary skill in the art would have been motivated to make the

combination because storing UDDI data into the directory enables the data to be

examined and used outside the environment in which it was originally created [p. 22,

Section 9 of Bergeson]. This allows directory entry containing the UDDI data to be read

and modified within the constraints imposed by the access control mechanisms of the

directory [p. 22, Section 9 of Bergeson].

8.   As to claim 2, Bau teaches a UUID (Universally Unique Identified) algorithm is

used to provide the second key for the at least one object [globally unique identifier

(GUID); p. 6, paragraph 0063].

9.   As to claim 3, Bau teaches each key is unique [p. 5, paragraph 0056].

10.   As to claim 4, Bau teaches the second key provided is monotonically increasing

[p. 6, paragraph 0063].

11.   As to claim 5, Bau as modified teaches each object of the plurality of UDDI object

has at least one of a defined key [p. 5, Section 5.1 of Bergeson] and a second key [p. 6,

paragraph 0063 of Bau and p. 11, Section 5.17 and p. 12, Section 5.18 of Bergeson].

12.   As to claim 11, Bau as modified teaches the plurality of UDDI objects comprises

a Business Entity object [p. 2, Section 4.1 of Bergeson], a Business Service Object [p.

2, Section 4.2 of Bergeson], a Binding Template Object [p. 3, Section 4.3 of Bergeson],

a Publisher Assertion Object [p. 4, Section 4.5 of Bergeson], and a TModel object [p. 3,

Section 4.4 of Bergeson].

13.   As to claims 6 – 10 and 12, these are product claims that correspond to method

claims 1 – 5 and 11; see the rejections to claims 1 – 5 and 11 above, which also meet

these product claims.

Conclusion

14.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LI B. ZHEN whose telephone number is (571)272-3768.

The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hyung Sub Sough can be reached on 571-272-6799. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/
Primary Examiner, Art Unit 2194